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09/666,519	09/20/2000	Alexander G. Dickinson	48556.00001	6942

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EXAMINER

HA, LEYNNA A

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/666,519

Applicant(s)

DICKINSON ET AL.

Examiner

LEYNNA T. HA

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-69 have been examined.
2. Claims 14-29, 34-35, 42-44, and 51-64 are rejected under 35 USC § 112, 2<sup>nd</sup> paragraph.
3. Claims 1-4, 7-35, and 59-69 are rejected under 35 USC § 102(e).
4. Claims 36-58 are rejected under 35 USC § 102(b).
5. Claims 5 and 6 are rejected under 35 USC § 103(a).

**Claim Rejections - 35 USC § 112**

*The following is a quotation of the second paragraph of 35 U.S.C. 112:*

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**6. The term "unique (or uniquely)" in claims 14, 18, 27-29, and 34 is a relative term which renders the claim indefinite. The term "unique (or uniquely)" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.**

The Examiner fails to ascertain the term "unique" used with "identification" wherein is not defined what is considered unique or uniquely enough to identify a user. The Examiner asserts that "unique" is an infinitive range and fails to provide the criterion of "unique", therefore is relative.

**7. The term "sensitive" in claims 42,51, 54, 59-62, and 64 is a relative term which renders the claim indefinite. The term "sensitive" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.**

The Examiner fails to ascertain how much or less "sensitive" can data be where the Examiner asserts "sensitive" can be a wide, endless range and therefore cannot be used as part of the claim language.

**\*\* Any claims not listed above are also rejected by virtue of their dependency.**

**Claim Rejections - 35 USC § 102**

*The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:*

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**8. Claims 1-4, 7-13, and 59-69 are rejected under 35 U.S.C. 102(e) as being anticipated by Okumura, et al. (US 6,553,493).**

**As per claim 1:**

Okumura, et al. discloses a secure cryptographic system that relates to public key cryptography, digital signatures and digital certificates issued by the certification authority (CA) (col.3, line 66 thru col.4, line 65). Okumura discloses a system that includes CA 102, CSP 104, and a third party 106 wherein the CSP and the third party are couple to the communications network 108 (col.6, lines 15-28). The CSP is in the form of a depository system further includes a CSU 140, certificate service engine 120, and a certificate database 130 (col.7, lines 8-22).

The CSP must have access to the private key in order to generate digital signatures for the digital signatures issued by the CA (col.7, lines 1-7). The CSP receives a request for a key pair from the CA where the CSP assigns on of the key pairs within CSU to the CA, thus establishing a mapping between that

key pair and CA by associating the identifier for the key pair with the CA (col.8, lines 35-39). The Examiner asserts Applicant's of "enrollment authentication data" is in the form of the teaching of Okumura's digital certificates that contains information pertaining to the identity of the entity and the entity's public key (col5, lines 26-30).

The cryptographic signing unit (CSU) 140 of the CSP stores CA private keys or key pairs and can digitally sign and/or decrypt messages using the private keys stored therein (col.7, lines 39-54).

Okumura includes a digital signature engine 170 in the form of an authentication engine. The Examiner asserts that the digital signature is used to make sure that the message sent is authentic by comparing with the data in the CSU.

Okumura teach a hash function is used to digitally sign a message that creates a message digest. The message digest is then encrypted using the entity's private key to produce the digital signature for the message. The Examiner asserts that Okumura silently teaches a cryptographic engine that performs cryptographic functions by disclosing the above material (i.e. hash function and encryption) (col.4, lines 19-56).

Okumura discuss the communications network 108 connected to the CSP and other engines of Figure 1, used for communicating with each other over the network (col.6, lines 25-28).

**As per claim 2:** as rejected on the same rationale as applied of claim 1.

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**As per claim 3:** Okumura includes plurality of storage facilities such as the CSU and the certificate database.

**As per claim 4:** Okumura discusses that each substantially randomized portion is individually undecipherable (col.4, line 33 thru col.5, line 5).

**As per claim 7:** See col.7, lines 39-54, discussing the private key corresponding to the secure cryptographic system.

**As per claim 8:** See col.7, line 56 thru col.8, line 11, discussing at least one private key corresponding to one of the multiple users.

**As per claim 9:** See col.4, lines 19-50, discussing cryptographic functions comprise one of digital signing, encryption, and decryption.

**As per claim 10:**

Okumura teaches the method of facilitating cryptographic functions by have one or more keys from the CSU mapped to the user (col.7, lines 44-65) and verifies authentication data such as the key pair of the digital certificate (col.8, line 35-col.9, lines 5).

**As per claim 11:** See col.4, lines 5-32, discussing the authentication data corresponding to the user.

**As per claim 12:** See col.4, lines 33-50, for receiving the hash of a message or document.

**As per claim 13:** See col.9, lines 13-60, discussing archiving the hash.

**As per claim 59:** Okumura includes a digital signature engine 170 in the form of an authentication engine. The Examiner asserts that the digital signature is

used to make sure that the message sent is authentic by comparing with the data in the CSU. Okumura discuss the communications network 108 connected to the CSP and other engines of Figure 1, used for communicating with each other over the network (col.6, lines 25-28). See also col.4, lines 5-50 and col.9, line 26-col.10, line 21.

**As per claim 60:** See col.9, lines 38-53, discusses the redundancy system where the user has been identified by the authentication results.

**As per claim 61:** See col.10, lines 1-32, discussing issuing the positive identification after the authentication results being positive.

**As per claim 62:** As rejected on the same rationale applies of claim 59.

**As per claim 63:** See col.6, lines 41-65, where the Examiner asserts that it is obvious that there are other trust engines with authentication engines and redundancy modules because the user can be verified in (allowed) multiple locations in order for the use to gain access other locations and systems and not just one system (col.5, lines 6-55).

**As per claim 64:** As rejected on the same rationale applies of claim 63.

**As per claim 65:** As rejected on the same rationale as applied in claim 1.

**As per claim 66:** As rejected on the same rationale applies of claim 63.

**As per claim 67:** See col.6, lines 38-63.

**As per claim 68:** As rejected on the same rationale applies of claim 67.

**As per claim 69:** See col.9, lines 5-67, discusses determining whether the trust engines are available.



**9. Claims 14-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Patel, et al. (US 6,438,690).**

**As per claim 14:** Patel, et al. discloses an authentication system for identifying a user with the user's enrollment authentication data wherein comprises an enrollment data module, RA desktop module, master Registration Authority vault, and a database (col.8, lines 41-60). The system includes a RA database and a Registration database (col.8, line 59-col.9, line 61). Further, Patel includes a certificate tables containing information about the requests for certificates and their status (col.9, lines 5-55). Also, see col.6, lines 22-35 and col.11-col.13.

**As per claim 15:** See col.9, lines 2-10 and lines 54-61; discussing the portions are not individually decipherable.

**As per claim 16:** See Figure 3.

**As per claim 17:** As rejected with the same rationale as applied in claim 16.

**As per claim 18:** See col.13, lines 26-34; discusses providing cryptographic functionality to the user.

**As per claim 19:** As rejected with the same rationale as applied in claim 16.

**As per claim 20:** As rejected with the same rationale as applied in claim 16.

**As per claim 21:** As rejected with the same rationale as applied in claim 16.

**As per claim 22:** See col.8, lines 50-51, discussing computer software systems.

**As per claim 23:** See Figure 3.

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**As per claim 24:** As rejected on the same rationale applies of claim 16.

**As per claim 25:** See Figure 3.

**As per claim 26:** As rejected on the same rationale applies of claim 16.

**As per claim 27:** See col.5, lines 2-67; discusses data storage facilities storing sensitive data.

**As per claim 28:** Okumura includes a data vault storing sensitive data (col.5, lines 60-62 and col.12, lines 14-44).

**As per claim 29:** See col.14, lines 23-28.

**As per claim 30:** As rejected on the same rationale applies of claim 14.

**As per claim 31:** As rejected on the same rationale applies of claim 15.

**As per claim 32:** As rejected on the same rationale applies of claim 16.

**As per claim 33:** As rejected on the same rationale applies of claim 26.

**As per claim 34:** As rejected on the same rationale applies of claim 18.

**As per claim 35:** As rejected on the same rationale applies of claim 19.

**Claim Rejections - 35 USC § 102**

*The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:*

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**10. Claims 36-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneier, et al. (US 5,768,382).**

**As per claim 36:** Schneier, et al. discloses having authentication data in geographically remote secure data storage facilities comprises a trust engine for receiving authentication data (col.5, line 29-col.6, line 52). Further, there includes the game computer incorporating random number in the authenticable message (col.10, lines 56-67).

**As per claim 37:** As rejected with the same rationale as applied in claim 36.

**As per claim 38:** See Figures 2 and 3.

**As per claim 39:** As rejected on the same rationale applies of claim 38.

**As per claim 40:** As rejected on the same rationale applies of claim 36.

**As per claim 41:** As rejected on the same rationale applies of claim 37.

**As per claim 42:** See col.16, lines 1-10.

**As per claim 43:** See col.16, lines 19-52.

**As per claim 44:** See Figures 2 and 3; shows the different computer (storage) mediums structures.

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**As per claim 45:** As rejected on the same rationale applies of claim 36.

**As per claim 46:** As rejected on the same rationale applies of claim 37.

**As per claim 47:** See Figures 2 and 3.

**As per claim 48:** As rejected on the same rationale applies of claim 47.

**As per claim 49:** As rejected on the same rationale applies of claim 40.

**As per claim 50:** As rejected on the same rationale applies of claim 41.

**As per claim 51:** As rejected on the same rationale applies of claim 42.

**As per claim 52:** As rejected on the same rationale applies of claim 43.

**As per claim 53:** As rejected on the same rationale applies of claim 44.

**As per claim 54:** See col.46, lines 5-59; discussing the software module wherein includes processing sensitive data which includes authenticating the user and performing cryptographic functions.

**As per claim 55:**

Schneier teaches destroying or deleting the sensitive data after completion of the action. In addition, the Examiner asserts that it would have been inherent to destroy the sensitive data because the system is more efficient in processing and executing data and saves storage space as well.

**As per claim 56:** See col.15, line 11-col.16, line 25; discussing biometric data and encryption algorithm.

**As per claim 57:** See Figures 2, 3, 4c, and 4h; shows the storage mediums.

**As per claim 58:** See Figures 4b and 6a; shows authentication and cryptography.

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**Claim Rejections - 35 USC § 103**

*The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:*

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**11. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being anticipated over Okumura, et al., and further in view of Schneier, et al..**

**As per claim 5:**

Okumura teaches a cryptographic system that includes the same rationale of claim 1, but fails to include biometric data such as fingerprints.

Schneier teaches biometric data which includes as fingerprints, retinal, voice , etc. are used to further enhance security wherein it used to authenticate and to verify the identity of a person/user to the system (col.15, lines 11-57). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention to include biometric data (i.e. fingerprints) because biometrics are more secure and more complex to forge or mutate (by an intruder) before gaining access to the system.

**As per claim 6:** as rejected on the same rationale applies to claim 5.

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**Conclusion**

For more details and explanations to the Examiner's rejections above, please review:

**Okumura, Et. Al.;** see col.3, line 1 - Et. Seq.

**Patel, Et. Al.;** see col.3, line 6 - Et. Seq.


**Schneier, Et. Al.;** see col.5, line 29 - Et. Seq.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEYNNA T. HA whose telephone number is (703) 305-3853. The examiner can normally be reached on Monday - Friday (7:00 - 3:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AYAZ SHEIKH can be reached on (703) 305-9648. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5631.

LHA  
September 8, 2003

  
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